



The Inland Northwest Informer

Information For Storm Spotters, Cooperative Observers And Everyone

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Spring/Summer 2017 - Volume 20

A Cold and Snowy Winter Summary of December 2016 - February 2017

By Zaaron Allen, Science and Operations Officer and Michael Murphy, Meteorologist

The winter of 2016 – 2017 will be remembered as one of the coldest and snowiest on record across the interior Pacific Northwest. Four out of the five major climate locations experienced a top 5 coldest winter ever, with all of those locations also experiencing a top 10 snowiest winter on record. The last time December

through February average temperatures were this cold was in the winter of 1992-93 for most local climate sites, except the Tri-Cities where one has to look back to the winter of 1948-49 to find a colder winter. The specific temperatures, snowfall information, and rankings are given in the tables on page 2. ❖



Figure 1. Main Street, Echo OR covered in deep snowfall on January 13, 2017. The temperature at the time of this photo was near -5° F. Photo by M. Murphy

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- Banner Image by T.W. Earle

| Temperature Summary: December 2016 - February 2017 | | | |
|---|-----------------------------|--------------------|----------------------------------|
| Location | AVG Temperature (°F) | Ranking | Coldest Day of the Season |
| <i>Pendleton, OR</i> | 28.4° | 3rd coldest | -8° on JAN 13th |
| <i>Walla Walla, WA</i> | 29.2° | 2nd coldest | -6° on JAN 12th |
| <i>Tri-Cities, WA</i> | 27.2° | 4th coldest | -9° on DEC 16th |
| <i>Yakima, WA</i> | 26.9° | 9th coldest | -4° on JAN 9th |
| <i>Bend, OR</i> | 27.1° | 4th coldest | -2° on DEC 17th |

| Snowfall Summary: Winter 2016 - 2017 | | |
|---|--------------------------|----------------------|
| Location | Snowfall (Inches) | Ranking |
| <i>Pendleton, OR</i> | 44.4 | 6th snowiest |
| <i>Walla Walla, WA</i> | 34.5 | 6th snowiest |
| <i>Tri-Cities, WA</i> | 27.9 | 8th snowiest |
| <i>Yakima, WA</i> | 36.5 | 11th snowiest |
| <i>Bend, OR</i> | 63.9 | 10th snowiest |

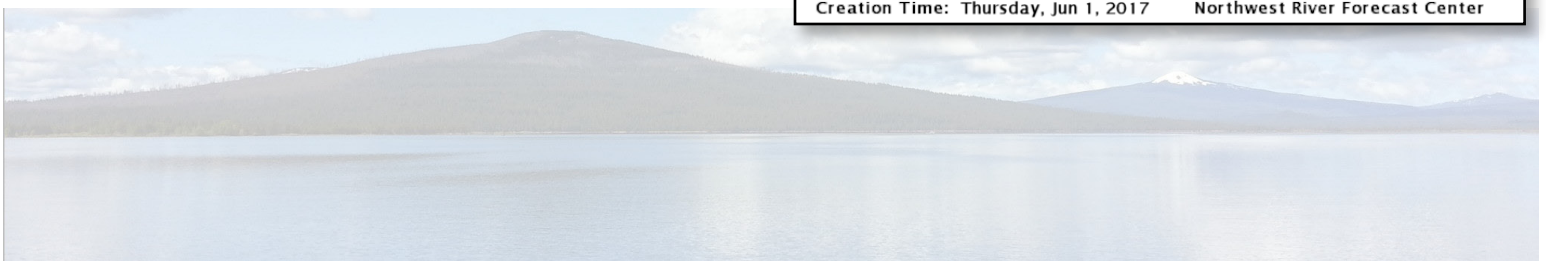
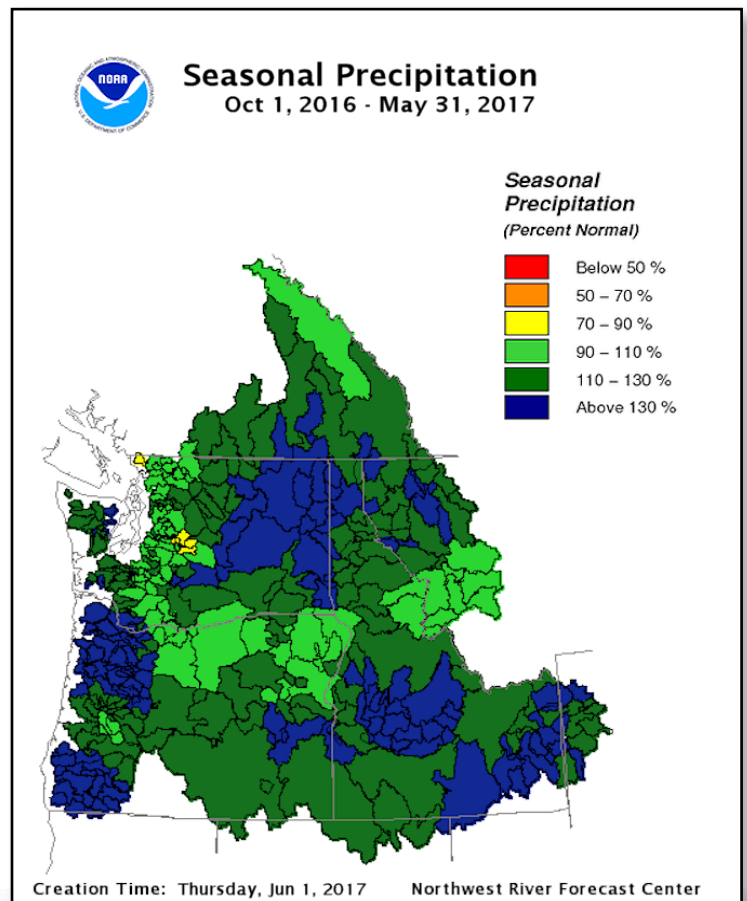
| Comparing This Winter Season (Dec-Feb) With Past Years | | | | |
|---|---------------------------------|---------------------------------|---------------------------------|-------------------------------------|
| Location | 2016 - 2017 AVG Temp | Last Colder AVG Temp | 2016 - 2017 Snowfall | Last Greater Snow Season |
| <i>Pendleton, OR</i> | 28.4° | 1992 - 1993 28.4° | 44.4" | 2008-09 45.8" |
| <i>Walla Walla, WA</i> | 29.2° | 1992 - 1993 28.8° | 34.5" | 1992-93 35.7" |
| <i>Tri-Cities, WA</i> | 27.2° | 1948 - 1949 26.6° | 27.9" | 1968-69 29.3" |
| <i>Yakima, WA</i> | 26.9° | 1992 - 1993 25.5° | 36.5" | 1996-97 66.0" |
| <i>Bend, OR</i> | 27.1° | 1992 - 1993 24.6° | 63.9" | 1992-93 89.5" |

Water Year Precipitation October 2016 - May 2017

By Marilyn Lohmann, Service Hydrologist

| Location | Amount In Inches | Percent of Normal |
|------------------------|---------------------|----------------------|
| Bend..... | 11.42..... | 124% |
| Condon..... | 12.41..... | 104% |
| Heppner..... | 11.81..... | 104% |
| John Day City..... | 9.75..... | 99% |
| La Grande..... | 16.61..... | 130% |
| McNary Dam..... | 9.34..... | 132% |
| Madras..... | 9.21..... | 109% |
| Meacham..... | 36.79..... | 132% |
| Milton-Freewater..... | 15.92..... | 117% |
| Mitchell 2NE..... | 14.34..... | 134% |
| Moro..... | 11.62..... | 119% |
| Pelton Dam..... | 9.87..... | 105% |
| Pendleton Airport..... | 14.67..... | 138% |
| Prineville 4NW..... | 10.21..... | 120% |
| Redmond Airport..... | 8.06..... | 118% |
| Wallowa..... | 20.27..... | 154% |
| Wickiup Dam..... | 22.84..... | 126% |
| Cle Elum..... | 20.27..... | 104% |
| Dayton..... | 20.62..... | 129% |
| Ellensburg..... | 11.64..... | 158% |
| Hanford..... | 8.88..... | 156% |
| Ice Harbor Dam..... | 13.16..... | 143% |
| Mill Creek Dam..... | 24.23..... | 155% |
| Mt Adams RS..... | 60.97..... | 144% |
| Prosser..... | 10.92..... | 150% |
| Selah 2NE..... | 10.25..... | 148% |
| Sunnyside..... | 10.19..... | 166% |
| Whitman Mission..... | 16.50..... | 138% |
| Yakima Airport..... | 11.30..... | 166% |

October was much wetter than normal with precipitation amounts from 200 to 300 percent of normal, followed by a dry November with amounts only 40 to 70 percent of normal. December was cold and fairly wet with near to above normal precipitation. January and February had above normal precipitation with well above normal precipitation in the Lower Columbia Basin in February. March and April saw above normal precipitation as well. May was unusually dry across much of the area with very dry conditions in central and north central Oregon, where amounts were only 20 percent of normal. ❖



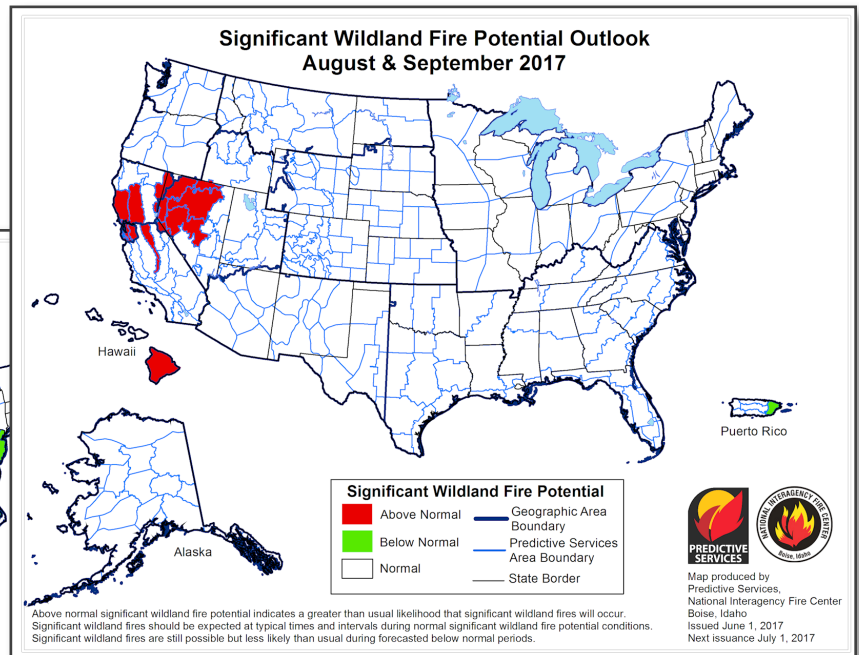
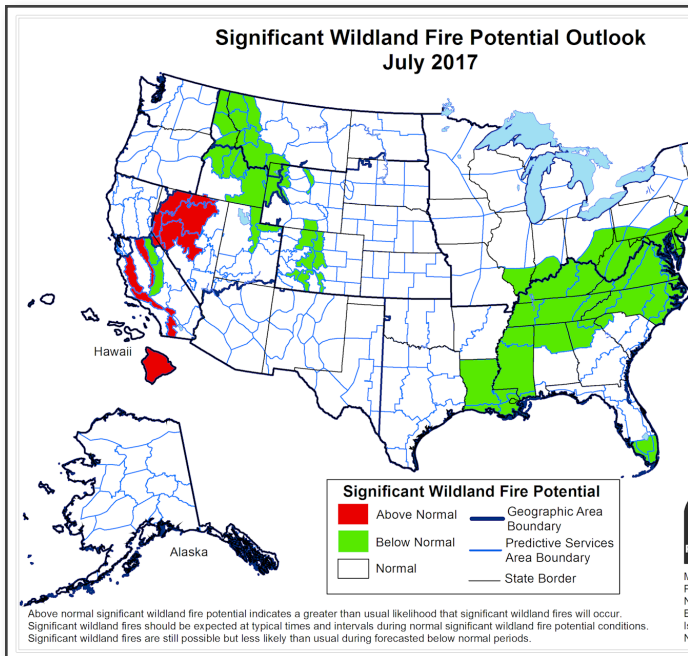
2017 Projected Fire Season

By Mary Wister, Incident Meteorologist / Fire Weather Program Leader

Wildfire season in the Pacific Northwest during the summer is greatly influenced by the climate observed during the winter and spring season. Obviously, the cool and wet winter and spring have caused considerable vegetation growth across the Pacific Northwest. As noted by many land management agencies in eastern Washington and eastern Oregon, the grassy areas are thick and tall. This is especially true with the cheat grass for areas throughout the Columbia Basin. Grass and shrubs respond quickly to changes in the atmospheric moisture, therefore a prolonged period of dry conditions will cause these fine fuels to dry quickly. This is important to keep in mind as we approach summer. Although the vegetation over the mountains is green and the larger fuels such as timber will take longer to dry, the threat of fire exists in the lower elevation grassy areas that have cured or almost cured.

The Climate Prediction Center is anticipating above normal temperatures and no significant precipitation or significant dry conditions for July through September. The Northwest Coordination Center Predictive Service in Portland, Oregon, is not expecting any unusual amount of significant fire activity in Washington and Oregon. This does not mean that wildfires are not likely. There are normally a few significant fires in the Pacific Northwest from July through September.

To be prepared for the upcoming fire season, make sure you limit the level of flammable vegetation and materials surrounding your home. Mow your lawn regularly and prune trees up to six to ten feet from the ground. For more tips, www.firewise.org is an excellent resource. ❖



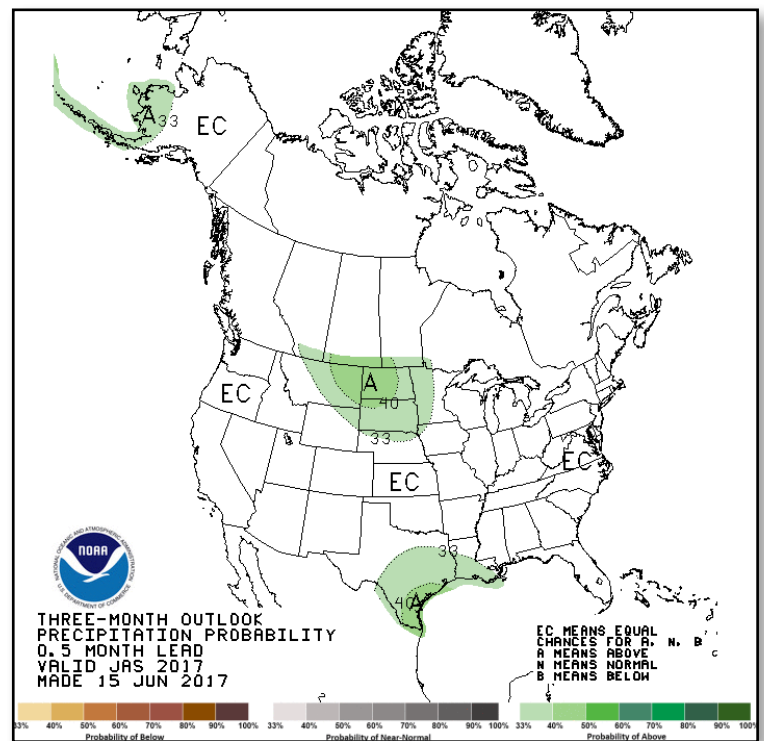
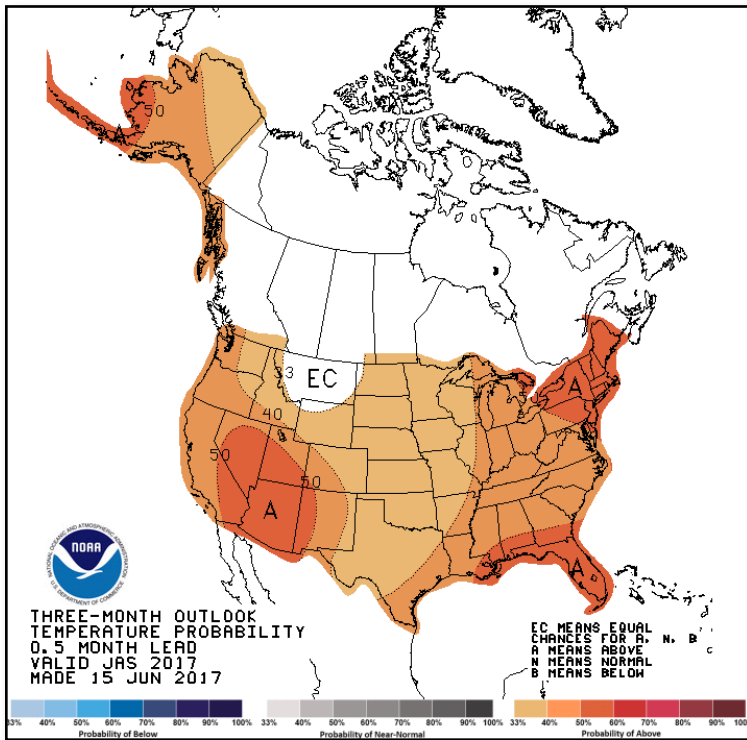
For full-sized graphics, visit <https://www.predictiveservices.nifc.gov/outlooks/outlooks.htm>

Summer 2017 Climate Outlook

By Michael Murphy, Meteorologist

After surviving one of the coldest and snowiest winters in recent memory across eastern Oregon and Washington one may be wondering what the upcoming summer has in store for our area. The spring months have thus far been much wetter and slightly cooler than normal. This has allowed the mountain snowpack and stream levels to remain higher than normal for most locations. Moving ahead into the summer months the Climate Prediction Center (CPC) is calling for a gradual pattern shift away from the recent cool and wet conditions. The three month outlook for June—July—August is indicating

Precipitation amounts have equal chances of being above, below or near normal through the heart of the summer months. Therefore, we can likely expect to see the typical summertime thunderstorm pattern, with little rainfall outside of these events. Even with low rainfall amounts being a possibility, it is fully expected that irrigated agricultural interests will be in much better shape this year compared to the last several years. This is due to the lingering above average snowpack in the mountains, saturated ground, replenished water table and higher than average stream flow forecasts. Area reservoirs are now near or at capacity.



Figures 1 & 2. The Climate Prediction Center is calling for greater chances of above average temperatures (shaded orange) across most of the US for the three month period of July—August—September. They are also calling for equal chances of above, below or near normal precipitation amounts across the Pacific Northwest during the same three month period.

greater chances for above normal temperatures across not only the interior Pacific Northwest, but the entire West Coast of the US.

Looking further ahead to the latter half of summer (July—August—September), the CPC is indicating even higher odds of seeing above average temperatures across the region. This is likely suggesting that more upper level ridges of high pressure will settle over the Pacific Northwest during the second half of the summer season. There will still be equal chances for above, below or near normal precipitation amounts. The higher chances for

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above average precipitation amounts is expected to be centered further east; over the northern Plains region. As for the El Niño, Southern Oscillation index (ENSO), the latest indications are that it will remain generally neutral through the summer and upcoming fall months.

Therefore, neither El Niño nor La Niña is expected to have much of an impact on our weather pattern here in the Pacific Northwest in the coming months. ❖

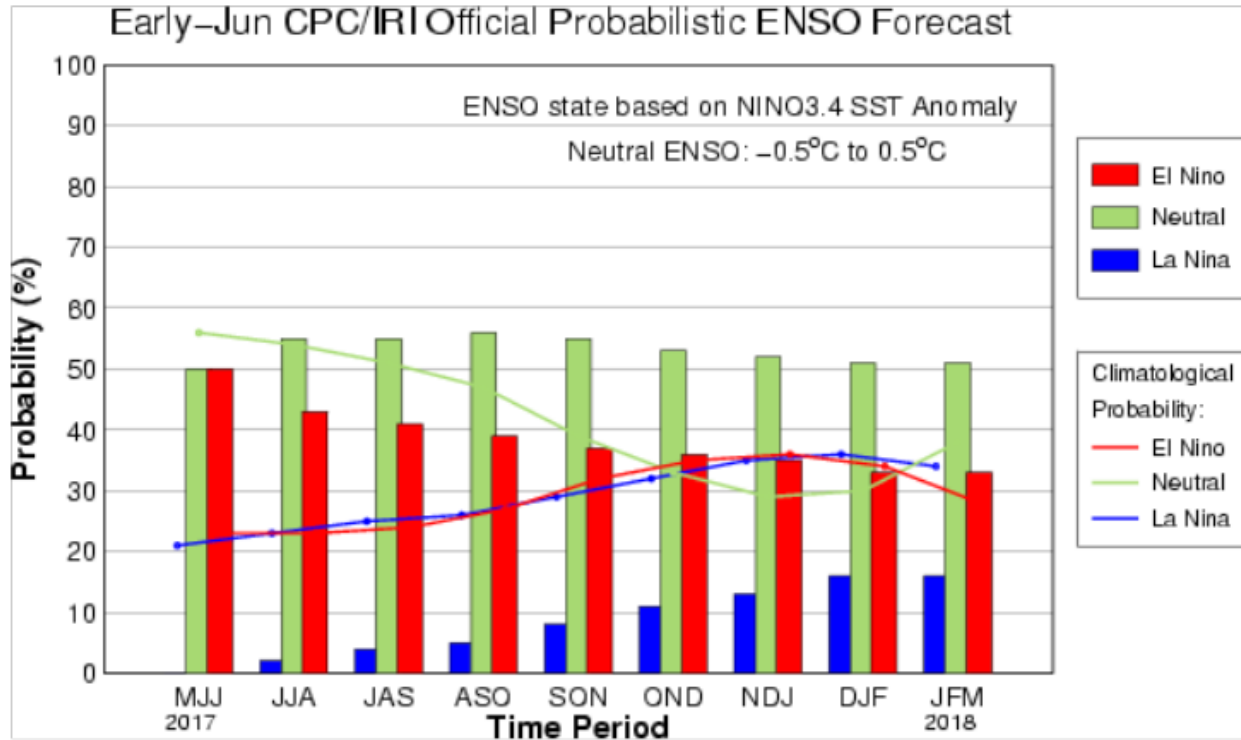


Figure 3 (above) The Climate Prediction Center (CPC) and International Research Institute for Climate and Society (IRI) Probabilistic ENSO Forecast through the upcoming fall and winter months. ENSO neutral conditions are now favored.

For more information on El Niño - Southern Oscillation, visit <http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/enso.shtml>

Cooperative Program Highlights

Cooperative Program awards were presented to several volunteer observers for time in service. Recipients of awards included Brian Cyphers of Prosser, WA for 20 years of service and John Duckworth of Wallowa, OR for 25 years of service, Congratulations to everyone! ❖



Donald Stonebrink, from outside of Lostine, OR was presented an award for 15 years of service in the NWS Cooperative Program Mr. Stonebrink's station is Lostine 4NE in Wallowa County in northeast Oregon.

Photo Album



*Menacing storm clouds brewing over the Rowena Crest area in the Columbia River Gorge.
Photo by T.W. Earle*

*Iridescent clouds, composed of mostly ice crystals use the sunlight to produce a spectacular show of color.
Photo by T.W. Earle*



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